Claims:

1. A method for the production of solid lubricant agglomerates comprising mixing particulate solid lubricant and an inorganic binder in the ratio of about 19 : 1 to about 1 : 19 by weight and adding a liquid to produce a mixture having about 5 to 60 weight % solids, drying the mixture to produce dry agglomerates, and classifying by size or milling and classifying by size the dry agglomerates to obtain a desired particle size cut.

2. A method as claimed in claim 1, in which an undersize particle fraction and an oversize particle fraction of agglomerates are produced by classifying followed by reprocessing the undersize agglomerate fraction by redispersing the agglomerate in the original liquid and reprocessing the oversize agglomerate particle fraction either by redispersing in the original liquid or by crushing and recovering the particle size that is in the desired particle size cut.

3. A method as claimed in claim 2 wherein, after the desired particle size cut is obtained by classifying, the binder in the desired particle size cut is rendered non-dispersible in the original liquid.

4. A method as claimed in claim 3, in which the solid lubricant is at least one lubricant selected from the group consisting of hexagonal boron nitride, graphite, calcium fluoride, magnesium fluoride, barium fluoride, tungsten disulphide and molybdenum disulphide particles.

5. A method as claimed in claim 4, adding a filler to the solid lubricant and binder in an amount up to 40 volume % of the solids.

6. A method as claimed in claim 4, in which the solid lubricant is hexagonal boron nitride and is mixed with the binder in a weight ratio of about 9 : 1 to 4 : 6 hexagonal boron nitride to binder.

7. A method as claimed in claim 6, in which the liquid is water and the binder is hydrous aluminum silicate that is stabilized at temperatures above 850°C in the desired particle size cut.

8. A method as claimed in claim 7, in which the binder is at least one of bentonite, fuller's earth or montmorillonite.

9. A method for the production of rounded, solid lubricant agglomerates comprising mixing particulate solid lubricant and an inorganic binder in a weight ratio in the range of about 19 : 1 to about 1 : 19 of solid lubricant to binder in water in a mixer to produce a slurry having about a 5 to 60 weight % solids, and drying droplets of the slurry to form dry, rounded, solid lubricant agglomerates.

10. A method as claimed in claim 9 comprising sizing the solid spherical agglomerates to produce an oversize fraction, an undersize fraction and a product fraction, pulping and recycling the oversize and undersize fractions to the mixer, and rendering the product fraction non-dispersible in the original liquid.

11. A method as claimed in claim 10, in which the solid lubricant is at least one lubricant selected from the group consisting of hexagonal boron nitride, graphite, calcium fluoride, magnesium fluoride, barium fluoride, tungsten disulfide and molybdenum disulphide particles.

12. A method as claimed in claim 11, in which the solid lubricant is mixed with the binder in a weight ratio of about 9 : 1 to 4 : 6 solid lubricant to binder.

13. A method as claimed in claim 12, in which the binder is hydrous aluminum silicate that is stabilized at temperatures above 850°C in the desired particle size cut.

14. A method as claimed in claim 9, in which the solid lubricant is hexagonal boron nitride and is mixed with the binder in a weight ratio of about 9 : 1 to 4 : 6 hexagonal boron nitride to binder powder.

15. A method as claimed in claim 11, in which the binder is at least one of bentonite, fuller's earth, montmorillonite, or combination thereof.

16. A method as claimed in claim 9, in which the solid lubricant is hexagonal boron nitride and is mixed with the binder powder in a weight ratio of about 9 : 1 to 4 : 6 hexagonal boron nitride to binder powder and slurried with water to produce a slurry containing about 20 to 30 weight % solids.

17. A method as claimed in claim 10, in which the solid lubricant is hexagonal boron nitride and is mixed with the binder in a weight ratio of about 9 : 1 to 4 : 6 hexagonal boron nitride to binder powder and is slurried with water to produce a slurry containing 5 to 60 weight % solids, and in which the binder powder is selected from the group consisting of bentonite, fuller's earth, montmorillonite and combinations thereof.

18. A method as claimed in claim 10, in which the solid lubricant is hexagonal boron nitride, is mixed with the binder in a weight ratio of about 8 : 2 hexagonal boron nitride to

binder powder and slurried with water to produce a slurry containing about 20 to 30 weight % solids, and in which the binder is hydrous aluminum silicate.

19. A method as claimed in claim 18, in which the hydrous aluminum silicate is at least one of bentonite, fuller's earth or montmorillomite.

20. A method as claimed in claim 2, in which the binder is sodium silicate.

21. A method as claimed in claim 17, additionally comprising adding a filler to the solid lubricant and binder in an amount up to 40 volume % of the solids.

22. Solid lubricant agglomerates produced by the method of claim 8.

23. Rounded solid lubricant agglomerates produced by the method of claim 9.

24. Rounded solid lubricant agglomerates produced by the method of claim 17.

25. Solid lubricant agglomerates produced by the method of claim 5.

26. Rounded solid lubricant agglomerates produced by the method of claim 21.